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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,936	08/09/2006	Masanori Tabata	4554-014	4514

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EXAMINER	
STELLING, LUCAS A	

ART UNIT	PAPER NUMBER
1797	

MAIL DATE	DELIVERY MODE
03/17/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/588,936	TABATA ET AL.	
	Examiner	Art Unit	
	Lucas Stelling	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 August 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *14-30* is/are pending in the application.

4a) Of the above claim(s) *14-18,20 and 26-30* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *19 and 21-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 August 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9-12-08 and 8-9-06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 14-18, 20, and 26-30 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 1-23-09.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 21 and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term “backstream” is indefinite since it appears in the figures, e.g., Fig. 6, and the corresponding written description, page 14 lines 35-30, that applicant intends the term "backstream" to mean "downstream" which is contrary to its normal meaning. For purposes of examination the term "backstream" will be interpreted to mean "downstream." It is suggested that “backstream” be changed to –downstream--.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 19 is rejected under 35 U.S.C. 102(b) as being anticipated by PCT Publication No. WO01/30706 to Hashizume ("Hashizume") (U.S. Patent No. 6,773,609 will be referred to as an English language equivalent document).

6. As to claim 19, Hashizume teaches a wastewater treatment apparatus that treats wastewater containing persistent substances comprising:

a wastewater treatment bath for treating the wastewater **(5 an 6)**;

an oxidizing reagent adding unit for adding an oxidizing reagent in the wastewater treatment bath **(7a is an ozone generator and 7b is an ozone bubbler)**; and

an ultraviolet treatment unit for irradiating an ultraviolet ray **(9 is an ultraviolet treatment tank)**.

7. As to claims 22 and 23, these limitations represent intended use limitations and limitations directed to the material operated on by an apparatus and do not serve to define the apparatus in terms of its structure. See MPEP 2114 and 2115. Notwithstanding, Hashizume teaches that the amount of ozone is a result effective variable with an ideal range of about 4-15 ppm in the water to be treated.

8. As to claim 24, these limitations represent intended use limitations and limitations directed to the material operated on by an apparatus and do not serve to define the apparatus in terms of its structure. See MPEP 2114 and 2115. Notwithstanding Hashizume teaches raising the pH to between 8 and 10 during pre-treatment steps **(See col. 6 lines 50-55)**.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hashizume in view of JP Patent Application Publication No. 2001-129566 to Asano ("Asano").

13. As to claim 21, Hashizume teaches the apparatus of claim 19 but does not teach lowering the pH of the water to be treated downstream of the oxidizing reagent bath. Asano teaches adding acid before providing the water to be treated to a UV treatment tank in order to prevent precipitation of dissolved metals such as calcium and magnesium on the outer surface of the UV lamp **(Asano 12, and 4 are upstream of the UV lamp 19)**. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to provide an acid adding unit after the ozone treatment and before the UV treatment in order to lower the pH of the water, thereby protecting the lamps from deposits.

14. As to claim 25, the pH of the wastewater is a limitation directed intended use of the apparatus and to the material operated on by the apparatus and does not serve to limit the apparatus in terms of its structure. See MPEP 2115. Notwithstanding, Hashizume teaches that the pH is raised to enhance the efficiency of the peroxide treatment **(See Hashizume col. 4 lines 36-55)**. It has been held obvious to remove elements from an apparatus if that function is not desired. In this case it would have been obvious, not to raise the pH in a pH unit, if the peroxide unit were bypassed or omitted. Therefore, it would have been obvious to a person of ordinary skill in the art not to raise the pH of the water before delivering it to the ozone treatment tanks **(5 and 6)**.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lucas Stelling whose telephone number is (571)270-

3725. The examiner can normally be reached on Monday through Thursday 12:00PM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

las 3-9-09

/Matthew O Savage/
Primary Examiner, Art Unit 1797